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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,621	03/01/2002	David Pratt Remsen	58378.127	7946

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EXAMINER	
WONG, LESLIE	
ART UNIT	**PAPER NUMBER**
2164	

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,621	REMSEN ET AL.	
	Examiner	Art Unit	
	Leslie Wong	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32,33 and 38-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-33 and 38-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Receipt of Applicant's Amendment, filed 06 April 2006, is acknowledged.

Withdraw of Claim Objections/Rejections

2. Applicants' amendments, submitted on 06 April 2006, overcome the claim objections and 112 rejections. Accordingly, the above-mentioned rejections, in the Office Action, dated 1 October 2005 are hereby withdrawn by the Examiner.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 38, 41 and 67-71 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an environment or machine which would result in a practical application producing a concrete, useful, and **tangible result** to form the basis of statutory subject matter under 35 U.S.C 101.

5. Claims 38 and 71 are system claims, but the claims lack of hardware components such as a processor or memory for any functions to be realized. As such the claims are non-statutory.

6. Claim 41 concludes with the step of "identifying a second name" without producing or conveying the information that the system has identified. As a result, claim 41 does not produce a tangible result and therefore it is not statutory. Similar comments also apply to claim 67.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four categories of invention.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 32, 33 and 38-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotter et al. (hereinafter "Cotter", "The National Biological Information Infrastructure: coming of age", Online Information Review, Volume 24 – Number 6, pp. 429-438, copyright MCB University Press, ISSN: 1468-4527 (2000)) in view of Martin R. Pullan et al. (hereinafter "Pullan", "The Prometheus Taxonomic Model: a practical

approach to representing multiple classifications", Taxon 49: 55-75, 2000, ISSN 0040-0262).

As per claim 32, Cotter discloses a method for use in managing taxonomic information, comprising:

identifying a first name that specifies an organism (Cotter, page 432 - 435);

determining that the name is sufficiently similar to a text string of a name entry in a names table (Cotter, page 435, "Conceptually, researchers or cataloguers creating metadata will enter a term that they know, which the system then checks against the controlled vocabulary ...");

identifying a first taxonomic identifier of the name entry (Cotter, page 432 – 435, "For instance, an IT IS check of the scientific name for 'even grosbeak' produces one preferred scientific name and multiple synonyms for the scientific name");

determining that the first taxonomic identifier is included in a classification entry in a classification table (Cotter, page 432 – 435);

identifying a second taxonomic identifier of the classification entry (Cotter, page 432 – 435); and

based on the second taxonomic identifier, identifying a second name (Cotter, page 432 – 435, synonyms and authorised term).

Cotter does not explicitly disclose allowing taxa to be organized according to more than one classification. Pullan teaches allowing taxa to be organized according to more than one classification (Pullan, pages 10-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

the method of Cotter by allowing taxa to be organized according to more than one classification as disclosed by Pullan. The motivation being to better organize the data and classify the taxa more flexibly.

As per claim 33, Cotter and Pullan teach all the claimed subject matters as discussed in claim 32, and further teach driving, based on the second name and original search parameters based on the first name, revised search parameters (Cotter, page 432-435).

Claims 38, 39 are rejected on grounds corresponding to the reasons given above for claims 32 and 33.

As per claim 40, Cotter discloses a system for use in managing taxonomic information, comprising:

a names table in which each entry associates a character string with a name identifier (Cotter, page 432 – 435);

a taxon table in which each entry associates a name identifier with a taxon identifier (Cotter, page 432 – 435);

a database of classifications (Cotter, page 432 – 435), the database including:

a reference table in which each entry associates a classification identifier with a taxon that represents the root of the classification (Cotter, page 432 – 435); and

a classification table in which each entry associates a taxon identifier with a classification identifier, a relationship attribute, and a second taxon identifier (Cotter, page 432 – 435);

a name identifier configured to identify a name that specifies an organism (Cotter, page 432 – 435);

a determiner configured to use the name and a database of classifications to help determine a classification for the organism (Cotter, page 432 – 435); and

an identifier configured to use the classification to help identify information associated with the organism (Cotter, page 432 – 435).

Cotter does not explicitly disclose the database of classifications that accommodates alternative classifications. Pullan teaches the database of classifications accommodates alternative classification (Pullan, page 10-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Cotter by accommodating alternative classifications as disclosed by Pullan. The motivation being to better organize the data and classify the taxa more flexibly.

Claim 41 is rejected on grounds corresponding to the reasons given above for claim 40.

As per claim 42, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach based on the classification, identifying information associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 43, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach the name is polynomen (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 44, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach the name is a modern name (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 45, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach the name is trinomen (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 46, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach the name is a scientific name (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 47, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach the name is non-scientific name (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 48, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach receiving a request for information including the name; and based on the request, selecting a database access layer to receive the request (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 49, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teaches receiving a request for information including the name; and directing the request to an application layer for serving client (Cotter, page 432 – 435).

As per claim 50, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach receiving a request for information including the

name; and directing the request to a data layer to determine a unique identifier associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 51, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach identifying a textual description associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 52, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach identifying an illustration associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 53, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach identifying a multimedia data object associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 54, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach identifying a data pointer associated with the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 55, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach basing the identification of the information on a defined domain of information (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 56, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach determining a biological classification for the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 57, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach determining a geographical classification for the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 58, Cotter and Pullan teach all the claimed subject matters as discussed in claim 41, and further teach determining a non-biological classification for the organism (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 59, Cotter and Pullan teach all the claimed subject matters as discussed in claim 58, and further teach identifying information associated with another organism that belongs to the classification (Cotter, page 432 – 435, Pullan, page 9-17).

As per claim 60, Cotter discloses a method for use in managing taxonomic information, comprising:

identifying a first name that specifies an organism (Cotter, page 432-435);

associating a first taxon with the first name (Cotter, page 432-435);

determining that the first taxon is included in a classification entry in a classification database (Cotter, page 432-435);

associating a second taxon with the classification entry (Cotter, page 432-435, synonyms and authorised term).

Cotter does not explicitly disclose the classification database allowing taxa to be organized according to more that one classification. Pullan teaches the classification database allowing taxa to be organized according to more that one classification (Pullan, pages 10-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cotter by allowing

taxa to be organized according to more than one classification as disclosed Pullan. The motivation being to better organize the date and classify the taxa more flexibly.

As per claim 61, Cotter and Pullan teach all the claimed subject matters as discussed in claim 38, and further teach at least one primary server having a first part of a distributed database, and at least one secondary server in communication with the at least one primary server and having a second part of the distributed database (Cotter, page 429-432, Cotter teaches a web based system which inherently includes servers).

Claims 62-66 are rejected on grounds corresponding to the reasons given above for claims 43-47.

As per claim 67, Cotter discloses a method for use in managing taxonomic information, comprising:

identifying a first name that specifies an organism (Cotter, page 432-435, "searching on 'evening grosbeak' ...", the 'evening grosbeak' is the first name);

associating the first name with a name identifier (Cotter, page 432-435, a first name is inherently includes a name identifier, such as "evening grosbeak"); and

associating a second name with the first name identifier based on objectively derived criteria (Cotter, page 432-435, "searching on 'evening grosbeak' also means simultaneously searching via these synonyms. The synonyms are the second name).

As per claim 68, Cotter teaches all the claimed subject matters as discussed in claim 67, and further teaches the objectively derived criteria includes a documented associated between the first name and the second name (Cotter, page 432-435).

As per claim 69, Cotter teaches all the claimed subject matters as discussed in claim 68, and further teaches wherein the first name is a scientific name and the second name is a common name (Cotter, page 432-435).

As per claim 70, Cotter teaches all the claimed subject matters as discussed in claim 68, and further teaches the first and second names are scientific names and wherein the second name is a factual variant of the first name (Cotter, page 432-435).

As per claim 71, Cotter discloses a distributed system for use in locating information resources related to biological organisms, the system comprising:

a set of client software for communicating with information management applications serving unique name identifiers associated with unique information identifiers (Cotter, page 432-436);

a first determiner to determine that a first unique name identifier is included within one or more classification entries in a classification table on a remote name server (Cotter, page 432-436);

a second determiner to determine a second unique name identifier is associated with the first unique name identifier with a names table on a remote name server (Cotter, page 432-436); and

a set of service software for distributing unique name identifiers associated with unique associated information identifiers as a proxy for one or more information management applications (Cotter, page 429-432, Cotter a web based system which let user search information related to biology etc).

Response to Argument

9. Applicants' arguments filed 06 April 2006have been fully considered but they are not persuasive.

Applicants argue that Cotter fails to disclose, teach, or suggest identifying a taxonomic identifier of the name entry and a classification table having classification entries containing taxonomic identifier as recited in claim 32.

In response to the preceding arguments, Examiner respectfully submits that Cotter on page 432, second column, second paragraph teaches the Integrated Taxonomic Information System (ITIS) which provides the foundation for understanding and integrating the similarities and differences among the worlds organism, both living and extinct. By providing a common vocabulary of specifies names, ITIS helps link all the biological data in the NBII. It is well-established that every Taxonomic System assigns a unique code or identifier to provide basis taxonomic information such as genus name. The taxonomic identifier also supplements this taxonomic information by naming a particular cell-group or locus as indicated by the Digital Archive of Journal Articles National Center for Biotechnology Information (NCBI) National Library of Medicine (NLM) Book 2.1. Cotter page 432, col. 2, paragraph 1 also discloses that *taxonomy* is the science of describing, naming, and *classifying* plants and animal. Without a classification means such as a classification table, Cotter would not have qualified to be called as an Integrated Taxonomic Information System (ITIS). As such, the fact that Cotter produces multiple synonyms for the specific scientific name for the name entry such as "even grosbeak" is evident that the ITIS Taxonomic System

contains the classification table to identify and associate the taxonomic identifier or code with the common name in order to come up with other names. Hence, Cotter teaches the limitations as claimed.

Applicants further argue that Pullan does not disclose, teach, or suggest determining if the taxonomic identifier is included in a classification entry in a classification table allowing taxa to be organized according to more than one classification as recited in claim 32. Instead, Pullan organizes taxons according to a hierarchy based on a rank and then links them together.

In response to the preceding arguments, Examiner respectfully submits that Pullan teaches the limitation "... allowing taxa to be organized... more than one classification..." as the same organism may be at times be classified according to different taxonomic opinions and subsequently have several alternative names (Page 1, Introduction, First paragraph). Further, Pullan teaches the "potential taxon" concept of Berendsohn (1995) was the first recognition of the need to separate the processes of naming and classification in order *to represent multiple classifications in a database* (Page 4, Last paragraph). Additionally, Pullan teaches that the "potential taxon" was proposed as a compromise and consists simply of a link to a taxon name, and one or more links to references where the taxon is circumscribed and/or assigned a taxonomic status. This allows instances of the use of the same name in differing contexts to be distinguished and so provides the basis for storing *multiple classifications* (Page 5, first

paragraph). Based on the above, it is submitted that Pullan teaches the limitations as claime.

Conclusion

10. The prior art made of record and not relied upon on form PTO-892 is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES RONES can be reached on (571) 272-4085. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2164

LW
July 22, 2006